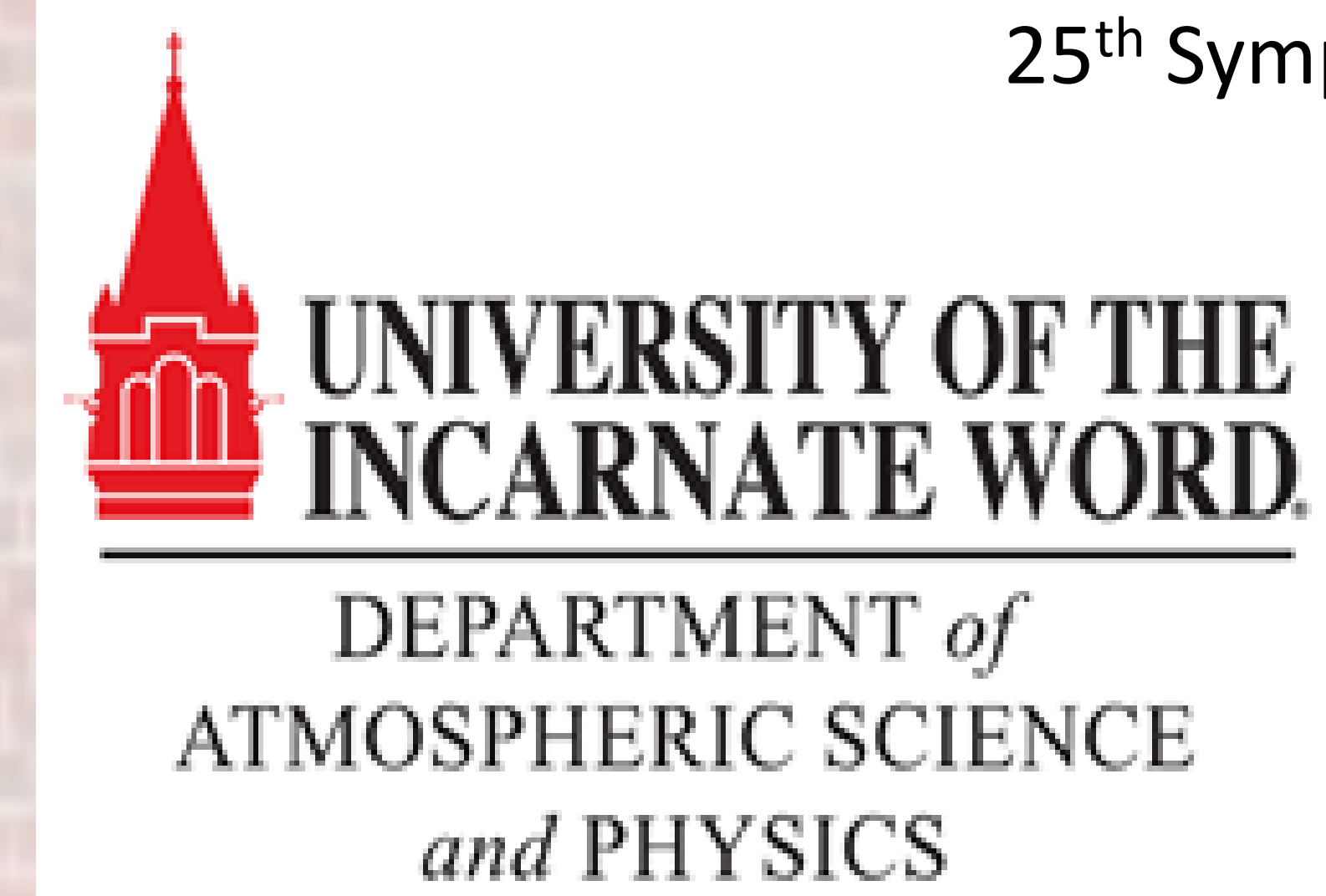


# Outcomes and Applications of the AMS/NSF Consortium for Ocean Leadership, MSI REaCH Project Workshop: Tools for the University Professor



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## Abstract

The 2015 Reconstruction Earth's Climate History (REaCH) Workshop held during June 2015, was aimed at providing university instructors with tools, techniques and resources to attract under-served students to consider science careers, using the current interest in climate change. This workshop allowed participants to observe/analyze signatures of paleoclimate change in ocean bottom sediment cores. Undergraduate students have opinions about climate change that reflect the community in general, everywhere from activism for change, and preservation and enhancement of the environment, to disbelief that climate change is occurring. To prepare critical thinking responsible citizens to participate in the discussion about climate change in Texas and the advance planning of for climate change impacts, they must be informed. Several tools suitable to engage the university students within the framework of the scientific method were demonstrated. The techniques demonstrated/learned are. The techniques used were:

Tool	Approach
Do-Talk-Do	Start with a student activity, follow it with short comments and then by a second student activity.
Wall Walk	Divide the class into teams. Pose a series of questions about the topic. Allow each team a short period of time (2-5 minutes) to write down answers to the question on large post-it sheets or white board sections. Rotate the teams though all the questions. Have a spokesperson summarize the notes on each question.
Multi-sourced data integration	Present key concepts by presenting data from multiple sources obtained by different techniques
Scientific data access and hands on sample inspection	Provide data samples, real world items and have the students examine and explore the meaning of the data or samples.
Non-judgmental team consensus building	Utilize student teams to explore a specific topic and summarize the results. Use a "what can you say about this topic" approach and have student teams interpret and summarized the results
Explore-Evaluate-Assess	Provide a data set or specimen for the students to explore. Have each team capture their evaluations and have the class assess and integrate the individual evaluations

## Summary

The tools utilized during the 50 hour workshop to train-the-trainers can be transferred to the university to engage students, challenge them to examine the data for the climate change process, and stimulate their interest in science as a career.

## References

1. Environmental Protection Agency, USG, Climate Impacts of Coastal Areas ([www3.epa.gov/climatechange/impacts/coasts/html](http://www3.epa.gov/climatechange/impacts/coasts/html))

## Recognition

The author would like to thank the American Meteorological Society and the National Science Foundation for their support. This poster is a direct result of the MSI-REaCH (Reconstruction Earth's Climate History) workshop held at the Gulf Coast Repository at Texas A&M University in College Station, Texas on June 21-27, 2015. He would also like to thank the Fall 2015 students of GEOL 1420 Oceanography for their help

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## Scientific data access and hands on sample inspection

You are looking at a smear slide from a ocean core.

- What do you see?
- What does it mean about the climate?

Ocean Bottom Core Sample

Inspection

Microscope view

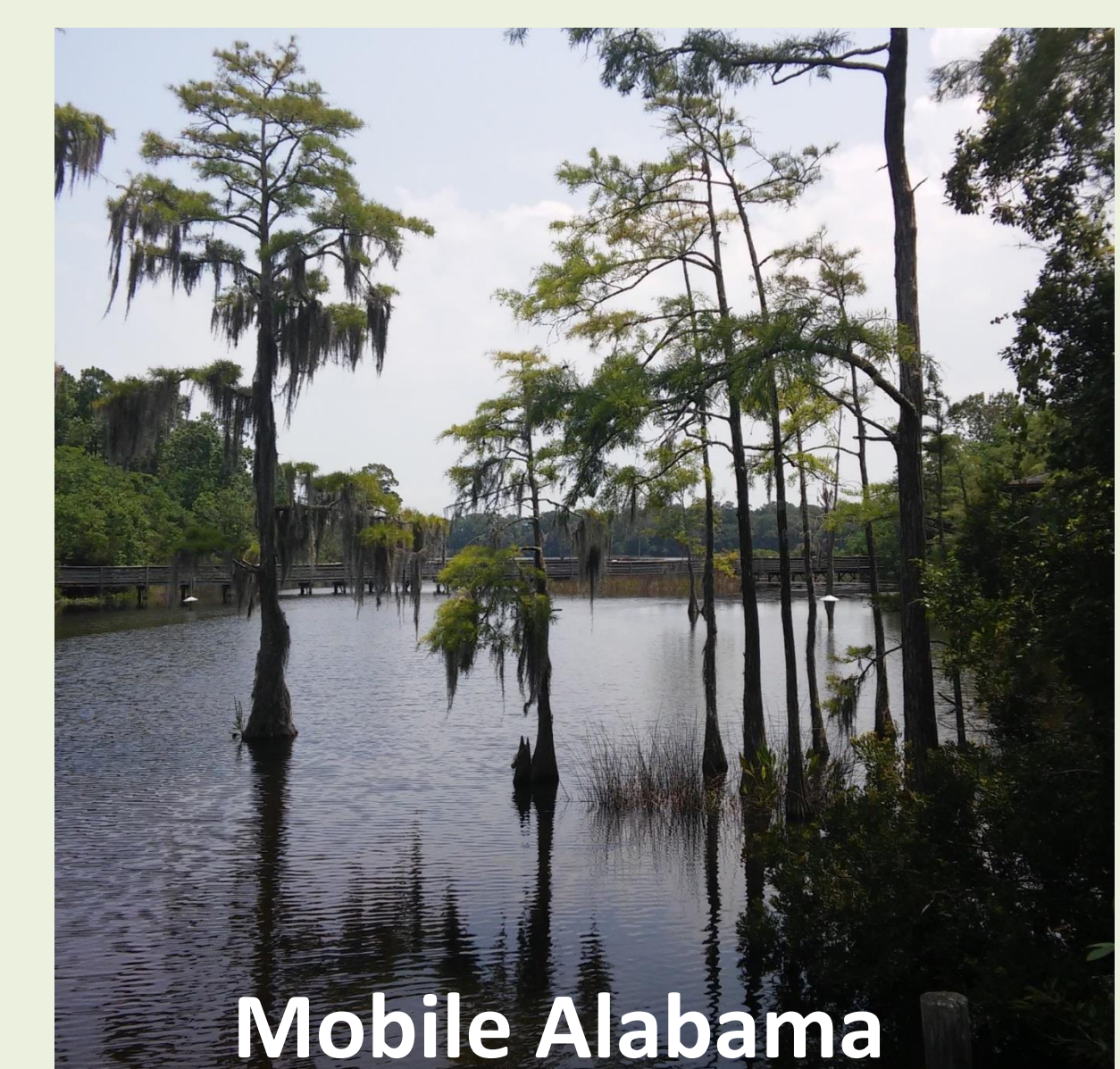
## Explore-Evaluate-Assess

What is this?

What is it role in coastal environment?

Seal Level Rises of 29 to 39 inches has be estimated by the end of the century (ref 1)

How will the environment be impacted?



This work is the result of a series of workshops sponsored by the American Meteorological Society/National Science Foundation titled MSI Reconstruction Earth's Climate History (REaCH) provide university instructors with the data, tools, techniques, and resources to engage students in the discussion over climate change and thus attract students to consider science careers.